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MEDICAL UNIVERSITY
OF
SOUTH CAROLINA

Annual Report
1978-1979



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OF
SOUTH CAROLINA

Annual Report
1978-1979

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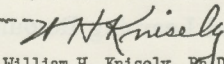
Medical University of South Carolina

171 ASHLEY AVENUE / CHARLESTON, SOUTH CAROLINA 29403

Honorable Ladies and Gentlemen:

It is my sincere pleasure to present this Annual Report in behalf of the Medical University of South Carolina. The progress reported herein would not have been possible without the generous support of the people of South Carolina through you, their elected representatives. I take this opportunity to express our gratitude and pledge our wholehearted cooperation in furthering the well-being of this State.

Respectfully submitted,


William H. Knisely, M.D.
President

"An equal opportunity m/f affirmative action employer"

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MEDICAL UNIVERSITY OF SOUTH CAROLINA

The Medical University of South Carolina possesses a rich heritage of service to the state spanning more than a century and a half. Founded in 1824 as the first medical school in the South, it was proprietary in nature and remarkably durable because of a faculty which gave generously of its talents and personal finances. Entering the Twentieth Century, the institution became caught up in the revolutionary changes sweeping through medical education, changes too costly to be borne by a small private school. The state was prevailed upon to assume ownership in 1913. With steadily growing support of the state, the college grew to university status in 1969.

Today the Medical University is a total health education center consisting of six colleges (Medicine, Dental Medicine, Pharmacy, Nursing, Allied Health Sciences and Graduate Studies) with teaching hospital plus numerous hospital affiliations throughout the state. Engaged in the professional training of some 2,500 students on campus, it is also coordinator of graduate medical training at other sites in the state. Through an extensive communications network, its Division of Continuing Education not only provides statewide programming, but also reaches out nationally via satellite. Regionally the Medical University extends educational opportunities through active association with the Charleston Higher Education Consortium.

INTRODUCTION

The year 1978-79 was a period of new initiatives to broaden the Medical University's contributions to the physical and economic health of the community and state.

One such initiative entailed the construction of a Pharmaceutical Development Center, simulating a manufacturing enterprise, in which middle management as well as pharmaceutical technicians can be trained. The facility provides South Carolina with added potential to attract industry.

In yet another initiative, a non-profit corporation was established to facilitate cooperation with government and industry in the development and introduction of new drugs. This represents a significant step in speeding the utilization of new knowledge gained in the academic laboratory.

The concern for broadening educational and economic opportunities was also reflected in activities of the Charleston Higher Education Consortium which installed Occupational Information Systems on all five college campuses; surveyed continuing education needs of engineers, chemists and technicians in the tri-county area; and initiated planning for an Education Opportunity Center program to encourage the pursuit of postsecondary education by the disadvantaged.

Meanwhile, the Medical University's research effort gained much needed administrative support with the appointment of a full-time research coordinator and his subsequent reorganization of the Office of Research and Sponsored Programs. Valuable assistance already is being provided investigators in their pursuit of extramural funding.

This report period could also be characterized as a watershed year. All elements of the institution in conjunction with nationally known consultants engaged in the planning process whose results will determine the course the Medical University should follow in the coming decade. The long range plan will be ready for review shortly.

In addition, search committees carried out their assignments in exemplary fashion to fill chairmanships in both the basic and clinical sciences. The new leaders who have been selected will bring distinction to this institution and state.

Thus, it is with a sense of accomplishment that the University looks back upon the year just concluded.

COLLEGE OF MEDICINE

The year 1978-79 can be generally described as a period of evaluation, analysis of problem areas, and a search for new initiatives.

Subsequent to the Liaison Committee on Medical Education Self-Study and receipt of the accreditation report, the College organized itself to give appropriate consideration to the recommendations contained in the report. The Departmental Chairmen's Retreat was dedicated to a restatement of problem areas and development of corrective action. Work continues toward the implementation of these activities.

The dedication of this school to the production of primary care physicians raises questions for the future. For example, what is the proper mix of primary care physicians and specialists? What is the role or interdependency of family medicine and general medicine or general pediatrics? Where does the practice of obstetrics fit (given nurse midwife and family practice competition for patients)? In attempting to respond to these questions, a series of meetings was held to review and explicate the philosophies of the various specialties. And, whereas no new goals or objectives were developed, the meetings undoubtedly contributed to a new understanding of the interdependency of the various medical specialists. With time, it is apparent that new relationships will develop and new roles will evolve.

With the simultaneous growing interest of the Commission on Higher Education in undergraduate and graduate medical education, the revitalization of the Area Health Education Center effort, and the development of state support for graduate medical education in community hospitals, there has been considerable attention given to statewide activities. Also, with the maturing of the new University of South Carolina School of Medicine, there have been new opportunities for new partnerships; such partnerships have all been statewide in scope. For example, one partnership effort involved the execution of a collaborative study of physician manpower needs and needs for graduate medical education. These were large studies requested through activities of the Commission on Higher Education.

The Dean's Office continued to encourage the Departmental Chairmen in the efficient management of their resources. A considerable amount of time was devoted to disseminating management information (concepts) and sharing (discussing) administrative-management problems. These activities are thought to be producing

greater efficiencies (e.g., word processing) and preparedness for decision making (given the probability of financial exigencies in the indefinite future).

Considerable effort has been dedicated to the search for new leadership to fill vacancies in a variety of departments. These efforts are significant because in each case they represent opportunity to analyze the department and set new goals. And, of course, each reorientation requires a plan for the allocation of limited resources. A major rethinking of the future role of pediatrics attended the search for a new chairman. This rethinking necessarily included the planning of the proposed hospital addition to support pediatrics since the configuration of such a structure will largely define how it functions.

College finances enjoyed a growth of approximately \$1,500,000 over the previous fiscal year, a much needed improvement over the gain of only \$366,000 experienced a year ago. Monies were used for modest faculty salary increases, and, for the most part, capital (equipment) improvements.

The College of Medicine faculty continues its replacement and growth process with a total net loss of 8 full-time faculty; part-time faculty experienced a net loss of 6. Faculty appointments have varied in number as the various departments have succeeded in filling vacancies according to their ordered plans.

The College of Medicine has admitted 165 students each year since 1971. While the applicant pool has been growing historically, last year the pool dropped from 1,206 to 970. The percentage representing South Carolina applicants remained the same, so it would appear that the state's additional medical school did not affect the pool. Apparently, applications dropped about 15 percent nationwide with a corresponding shift to engineering fields. The number of female applicants (and accepted students) both white and black continued to increase.

In 1978, of the 382 applicants from South Carolina, 162 were accepted. There were 6 black admissions in 1978 and 7 in 1977. A total of 164 students completed their course requirements during 1978-1979.

The most notable change affecting curricula was the reduction of required lecture time.

The College was saddened by the deaths of three esteemed colleagues, Dr. Edwin Boyle, Jr., Clinical Professor of Medicine and Family Practice, on July 9, 1978; Dr. Benjamin H. Boltjes, Professor

Emeritus of Laboratory Medicine, on November 1, 1978; and Dr. Burness Austin Barrington, Jr., Associate Professor of Anatomy, on June 18, 1979.

As is the custom, this Annual Report features one component of the College for inclusion in detail. Major accomplishments of the Area Health Education Center (AHEC) are highlighted.

SOUTH CAROLINA AREA HEALTH EDUCATION CENTER

Major Accomplishments

1. The number of off-campus medical residents in South Carolina has increased from 69 in 1972 to 314 in 1978.
2. Undergraduate elective rotations in rural sites have increased from 27 student weeks in 1972 to 902 student weeks in 1978.
3. A comprehensive residency retention program has increased substantially the number of physicians practicing in South Carolina from 91 physicians per 100,000 population in 1972 to 119 physicians per 100,000 in 1978.
4. The entire senior class (65) of the Medical University's College of Dental Medicine rotates through an off-campus AHEC-established community hospital dental clinic for three weeks.
5. The Area Health Education Center has been instrumental in increasing the number of black physicians who practice in South Carolina by 28 percent during the past 24 months—1 per 24,000 = 30 in 1976 to 1 per 15,000 = 57 in 1978.
6. A comprehensive team of health professionals (medicine, dentistry, nursing, pharmacy, allied health, and support services) has been established and is functioning through statewide AHEC councils in each discipline. Student rotations are provided in each discipline.
7. The publication of *The South Carolina AHEC Directory of Educational Resources*. The Directory lists human, library, and audiovisual resources available through the AHEC system and other supporting or cooperating agencies.
8. The development of the Statewide Needs Assessment Program (SNAP). SNAP is a curriculum development tool utilized mainly for continuing education program planning. The computer program is universal, i.e., it has the potential to serve all health fields.
9. The Area Health Education Center has developed a computer based Clearinghouse of health related workshops and seminars.

The program is designed to alert South Carolina health practitioners of educational opportunities, aid continuing education personnel in calendar planning, and eliminate unnecessary duplication. A clearinghouse printout of reported activities is being mailed to appropriate health education officers monthly. In addition to the monthly hard copy report, the Health Communication Network is broadcasting an abridged form of the clearinghouse with weekly updates.

10. Two new Family Practice Residency Programs were accredited during the year, one at McLeod Memorial Hospital in Florence and the other at Self Memorial Hospital in Greenwood, bringing to six the total of accredited off-campus Family Practice Programs.

COLLEGE OF DENTAL MEDICINE

There were two especially pleasing achievements recorded during the year. The first was the successful site visit by the American Dental Association Committee on Accreditation which gave the College's undergraduate program full approval for six more years. The second item of note was the successful completion of state board licensure examinations by all the June graduates.

While the undergraduate program was fully approved, the visiting ADA committee called attention to the need for additional faculty, careful planning for clinical space utilization and the need for increased clinical research space, items which will require appreciably more funding. It also pointed out the increase in the student body from 161 to 220 in 1980 because of the return of the four-year curriculum might require additional classroom support. The June 1979 class was the last to graduate in three calendar years.

Because of the curriculum conversion, there was only one class working in the clinics most of this report period. These students carried out 12,581 procedures on a total of 2,403 patients. Dental hygiene students also utilized the College of Dental Medicine's clinics to perform 943 prophylaxes.

Patients also received care in the dental clinics at Charleston County Hospital, Richland Memorial Hospital and Sea Island Health Center under the supervision of College faculty. The Oral Pathology Department analyzed a total of 1,425 biopsies on patients from throughout South Carolina.

All students are being taught cardiopulmonary resuscitation techniques so that they can properly handle any emergency that may arise.

There were only minor changes in office assignments and space within the main College building. Elsewhere the College in January, 1979, opened a new six-chair dental clinic in the Clinical Science Building. Support for the necessary renovations and equipment for this clinic came from capitation funds. This clinic will allow undergraduate and graduate students to give better treatment to the medically handicapped patient. It also encourages interdisciplinary teamwork for comprehensive patient care.

Student rotation time at Richland Memorial Hospital in Columbia, S. C., was extended from two to three weeks. In the future, undergraduate students will spend a total of six weeks in extramural activities.

Cooperation between the College of Dental Medicine and State Board of Dental Examiners remained excellent. The State Board held two examinations during the year at the College.

Dental assistants from Midlands Tech in Columbia and Florence/Darlington Tech spent two weeks studying and observing at the Medical University.

Faculty were very active as lecturers to study groups throughout the state. Also, the College, in conjunction with the Area Health Education Center, provided considerable support to the annual South Carolina Dental Association meeting held in May, 1979, in Charleston. Sixteen courses were given by the College's Division of Continuing Education, nine of them presented by the College faculty.

The Office of Computer Resources is engaged at the present time in implementing the development of a comprehensive patient information system. This will require a larger computer but will result in improved patient control and clinic utilization.

Principal research emphasis is being placed in the areas of implant materials, action of saliva on periodontium, restorative dental materials, and genetics. The need continues for more space for clinical research.

Upon the retirement of Dr. William B. Irby, who continues to serve on a part time basis, Dr. Richard W. DeChamplain was named to succeed him as Chairman of the Department of Oral Surgery.

The quality of student applicants for this coming year was very good. The 56 applicants accepted are all from South Carolina, with 19 different counties represented. The number of women entering the freshman class has increased appreciably, from a total of five the previous year to eleven currently.

COLLEGE OF GRADUATE STUDIES

During the academic year, the Office of Research and Sponsored Programs was transferred to the College of Graduate Studies and the Dean was made Dean of the College of Graduate Studies and of University Research. In addition, in view of the unique contribution of the Department of Biometry to the education of graduate students and to the research efforts of the University, this department was transferred from the College of Medicine to the College of Graduate Studies.

The College of Graduate Studies has continued to maintain a stable enrollment while emphasizing increased quality of accepted applicants. No new programs were developed during the year, but four students entered for the first time the program for the Ph.D. in Molecular and Cellular Biology and Pathobiology. Three more have enrolled for the coming year. The M.D./Ph.D. Medical Scientist Program begun last year has two students. A total of 126 students was enrolled in the college in 1978-79.

The number of applicants, acceptances, admissions and graduates from programs administered by the college for the period 1975-79 is as follows:

<i>No. Students</i>	<i>1975</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>	<i>1979</i>
Applying	167	220	143	172	220
Accepted	78	86	72	41	50
Admitted	50	44	35	25	33*
Graduated					
M.S.	16	12	10	10	12
Ph.D.	3	9	4	9	13

The quality of applicants has moved up appreciably during this same period. Following are the overall grade point averages and combined mathematical and verbal aptitude GRE scores for admitted applicants.

	<i>1975</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>	<i>1979</i>
GPA	2.97	3.14	3.20	3.20	3.30
GRE	1139	1191	1111	1128	1239

The College has been engaged the past two years in strong efforts to broaden and enrich the intellectual environment of the faculty and students by encouraging intramural and extramural communication. The James W. Colbert, Jr., Research Lecture Series, initiated

* Anticipated.

in the 1977-78 academic year, had as its lecturers this year Drs. Albert B. Sabin, Thomas E. Gaffney and H. Hugh Fudenberg, while Sir Charles Stuart-Harris presented the first University Colbert lecture. A committee consisting of Drs. Albert B. Sabin, Thomas E. Gaffney, E. Carwyle LeRoy, Mitchell I. Rubin and H. Hugh Fudenberg was established to choose an annual University Colbert lecturer. The bimonthly College research lecture will continue to present results of intramural research efforts.

To improve personal interaction with the larger scientific community, a visiting professor's program was begun. Five departments sponsored a visiting professor during the year. The program brought faculty, students, and the visiting professors together for provocative and searching conversations on the nature of scientific inquiry in this highly successful venture. The following visiting professors were on campus in 1978-79: Dr. Bo DuPont, Sloan Kettering Institute, Basic and Clinical Immunology and Microbiology; Dr. William Still, Commonwealth University, Pathology; Dr. K. S. Fu, Purdue University, Biometry; Dr. Frank N. Low, University of North Dakota, Anatomy; and Dr. Frank Putnam, Indiana University, and Dr. Bevin Miller, University of Sidney Farms, Australia, Biochemistry.

The College was able to sponsor a limited postdoctoral fellowship program in the recognition that the postdoctoral fellow, with his almost total emphasis on the laboratory and his research development, provides a most important stimulus to the intellectual growth of the graduate student and a challenge to the faculty. Four fellows were supported in three departments. The College will strive for marked program growth in 1979-80 to serve as the basis for the development of an extramurally funded expansion of this important segment of the academic community.

Also during the year the College was able to provide travel for 23 students to attend national meetings to present the results of their own research and to participate with their research colleagues from all over the country in scientific dialogue. Attendance of these meetings helps make known the name of the Medical University and exposes young students about to start a scientific career to the critical environment of the scientific community in the U. S.

Department of Biometry

The Department taught 37 courses to 564 students in five Medical University Colleges and, in addition, participated actively in the Charleston Higher Education Consortium with exchanges of faculty and students with both the College of Charleston and The Citadel. The Department recruited students from all of the colleges and universities in South Carolina with particular emphasis on minority recruitment.

The faculty of the Department participated in 54 national, regional and state meetings of professional organizations and served on 39 committees or councils.

The faculty also presented 11 papers and authored or co-authored 29 publications, with an additional 27 papers in press. These include the publication of six books.

The department was the recipient of a training grant from the National Heart, Lung and Blood Institute to support one post-doctoral and two predoctoral trainees.

The faculty of the department continued to emphasize intramural and extramural collaborative and consultative projects.

The addition of a Prime 550 Computer System should enable the department to run many of its own statistical procedures.

COLLEGE OF PHARMACY

Completion of the first phase of the College's \$2,500,000 renovation program was marked by the dedication this spring of the new 15,000-square-foot Pharmaceutical Development Center. Simulating an industrial pharmacy plant, it is considered to be the largest and best equipped of any similar training facility in the nation.

Of particular interest to pharmaceutical manufacturers will be the training of middle management personnel on the baccalaureate and doctoral levels and pharmaceutical technicians as well. But the Center also will vastly expand the pharmaceutical production capability of the Medical University and provide a backup system in times of disaster when large quantities of medications are needed in a short time.

The 40-room suite contains sterile preparation rooms with air lock entrances, special air flow and filter systems, seamless floors and surfaces coated with bacterial resistant paint. It also includes milling and drug mixing rooms; storage receiving and quarantine areas; equipment storage and work areas; biological and general control space; office and conference rooms.

In his dedication address, State Senator Allen Carter made note of the potential of this facility to attract pharmaceutical industries to South Carolina.

The Center is located on the first floor of Buildings E and F of the old Quadrangle. Renovation of the third floor of building F was begun late in the spring, with the classrooms to be completed by September, 1979, and the remaining portion by early 1980. A new computer room will also be completed in the fall to permit expansion of the academic computing program.

With the cooperation of the Department of Laboratory Medicine, the pharmacokinetic service was thoroughly tested and received approval of the Hospital Executive Committee as an established program. As a result, Doctor of Pharmacy students began rotating through the service as part of their educational experience.

The College's curriculum was totally redeveloped this year to permit the implementation of the semester system. In the process, additional elective time was made available to permit greater student course selection. To eliminate the need for two separate curricula in the Doctor of Pharmacy program, the faculty voted that in 1979-80 all entering doctoral students be required to have the B.S. in Pharmacy degree to be eligible for the program.

Service programs of the College continued to receive wide recognition. The Poison and Drug Information Center located in the hospital pharmacy was designated the National Pesticide Information Center as of June 1. Its director, Dr. Harold Trammel, meanwhile continued to provide consultation to the S. C. Department of Health and Environmental Control on drug and poison information matters.

In other service functions, the radioisotope program developed by Dr. James Cooper had an extremely successful year providing service to the Medical University Hospital and seven other hospitals in the Low Country. The pharmacokinetic dosing service, established as part of the College's educational program, is now providing full dosing service coverage to all Medical University patients and also answering requests from affiliated hospitals. A nutritional service, as a joint program between the College of Pharmacy and Department of Family Practice, was instituted and is providing in depth nutritional consultation for patients at the Medical University, Veterans Administration and Charleston County Hospitals.

The college's computerized pharmacy system continued to receive recognition. The publication, *Drug Topics*, cited the program used by the Charleston Naval Regional Hospital as representing a

major step forward in the delivery of health care to military personnel. The system was based on that developed by the College.

A \$50,000 royalty, shared with the Department of Family Practice, was received in January, 1979. In addition, approximately \$7,500 was received in alumni donations, \$3,000 from Merck, Sharp and Dohme, \$1,000 from IVAC Corporation, and \$1,000 from the National Association of Chain Drug stores to be used for student scholarships. Altogether, 66 students were awarded financial aid from governmental and other sources in the total amount of \$176,517.

All student organizations had a very active year. The Student American Pharmaceutical Association for the first time published a yearly activity calendar, and, among community projects, carried out a Hypertension and Diabetic Clinic in a shopping mall. The senior students undertook the publication of *The Cosmian*, the College of Pharmacy yearbook.

Eleven members of the faculty had a total of 21 articles published in scientific and professional journals. One faculty member wrote a chapter in the American Pharmaceutical Association's *Handbook on Non-Prescription Drugs*, and two wrote a manual for preceptors and externs in the College's clinical program.

The faculty presented sixty-four seminars throughout the country on all aspects of professional and scientific pharmacy. In addition, fourteen local seminars were presented to civic groups on various aspects of drug abuse or poison control. Ten papers were presented at national professional meetings of the American Chemical Society, American Society of Hospital Pharmacists, and American Pharmaceutical Association.

On special invitation, a faculty member presented a series of lectures on "The Influence of Disease States on Pharmacokinetics" at the National Institute of Health, Caracas, Venezuela. He also presented a course on clinical pharmacokinetics for health professionals at the University of Santiago, Spain.

The college sponsored the first Pharmaceutical Development Conference, at Kiawah Island, which attracted 41 participants from across the nation.

COLLEGE OF NURSING

The year was a very productive one for the College, highlighted by the development of the Graduate Program in Nursing, the initiation of the baccalaureate satellite program on the Winthrop College campus in Rock Hill, and the development of the project funded by the Kellogg Foundation through the Southern Regional Education Board to assist 25 working registered nurses employed in the Medical University Hospital to earn their Bachelor of Science in Nursing degree.

In September, 1978, the College of Nursing's Advanced Nurse Training Grant application was funded for a period of three years in the total amount of \$473,895. Due to the late funding of the grant, the recruitment of a permanent director had to be delayed; however, an acting director was employed through June 30, 1979.

Much of the year was spent in setting up the mechanics of the graduate program including admission criteria and procedures. Also details were worked out with the faculty in the Master of Health Sciences Program in the College of Allied Health Sciences to secure instruction in the teacher education and administration minor which is to begin in the second year of the grant. Five students have been admitted to the Nurse-Midwifery program who will complete requirements for the master's degree in two years. Twenty-eight part-time students have been admitted who have shown interest in the other clinical areas to be developed at the graduate level at the Medical University.

On July 1, 1979, a Director of Graduate Programs was appointed who had served in various teaching and administrative capacities in the College of Nursing for the past three years. A department chairman of Graduate Maternity Nursing and a department chairman of Graduate Pediatric Nursing also were employed. In addition, a chairman for the Nursing Administration minor was appointed. Thus in the second year of the Advanced Nurse Training Grant, the College is meeting the objectives of the grant.

A Special Project Grant to establish a baccalaureate degree Satellite Program for registered nurses at Winthrop College was funded in late September, 1978. Again, the late funding date of the grant made it impossible to secure a project director at the start. The project was administered by the Assistant Dean for Special Programs in the College, and she was assisted by several faculty who offered nursing courses at Winthrop College for the first time. The first students were admitted in January, 1979. By September 1, 1979,

an estimated 30 registered nurses will be in this program. As of June 15, 1979, a doctorally prepared faculty member was employed and appointed Project Director for the Satellite Program.

The College of Nursing has signed a "Memorandum of Agreement" with Francis Marion College to develop a satellite baccalaureate program on the Francis Marion College campus in Florence. Although this second satellite program will not begin within the next academic year, a commitment has been made to continue planning activities with Francis Marion College and other interested institutions and persons. This effort to meet a documented health manpower need in the Pee Dee Area is another example of the expanding cooperative efforts of the College.

A grant in the amount of \$87,225 was received from the Southern Regional Education Board and the Kellogg Foundation to assist 25 working registered nurses employed in the Medical University Hospital to earn their Bachelor of Science in Nursing degree. This program will end in November, 1979. There are 23 nurses studying to complete requirements for the degree. Cooperation of the Department of Nursing in the hospital has been notable.

Commencing September 1, 1979, the College of Nursing will initiate a one plus three curriculum. Students will be admitted to the College of Nursing after completing one or more years of college. This change in curriculum structure was brought about by the increasing numbers of well-qualified students with one or more years of college who were seeking admission to the nursing program. The emphasis in the undergraduate program continues to be the production of clinically competent baccalaureate degree nurses. All two and four year colleges and universities in the State have been notified of the change in curriculum pattern.

In other actions affecting the undergraduate program, faculty revised policies for methods of validation and re-establishment of credit for nursing students seeking a baccalaureate degree. Following the example of the Department of Medical-Surgical Nursing, the Departments of Pediatric Nursing and Maternity Nursing completed modularization of their courses resulting in closer correlation of classroom theory with clinical practice. Faculty in Leadership in Nursing Practice, Community Health Nursing, and Psychiatric-Mental Health Nursing initiated modularization of their courses.

Faculty conducted a review of the gerontological content of the curriculum as a first step toward identifying any needed refinements or augmentation of content in this area. They deferred to a later

time the addition of an undergraduate patho-physiology course to the curriculum.

Several consultants were brought to the College to share their expertise with faculty and to assist faculty in the evaluation process. In addition, the College received considerable assistance from the University's Office of Educational Services in the evaluation of individual courses as well as the total curriculum.

The College received \$12,924 from the Area Health Education Center (AHEC) in support of clinical experiences for junior and senior students in a variety of rural hospitals and clinics. The five-week summer practicum course, which falls between the junior and senior year, saw several students at the Grand Strand Hospital at Myrtle Beach, at Conway Hospital, and Loris Hospital. In addition, several students took electives in rural health clinics around the State. A new Coordinator for Nursing was employed by AHEC in January, 1979, and received a faculty appointment in the College.

The Nurse-Midwifery Program admitted 12 students in September, 1978, from 141 applicants. Five of the admitted students will be graduate students in Maternity Nursing.

Funding was obtained from the Family Life and Population Council of the Church World Service to help prepare a foreign nurse from Nicaragua to take State Boards in February, 1979. She successfully completed the State Boards and obtained her R.N. licensure in the United States. She will be entering the Nurse-Midwifery Program in the Fall.

During the year, certified nurse-midwives provided management of antepartal care to women in six clinical sites in the state for a total of 6,637 antepartal visits. In the same period, 510 women were delivered by nurse-midwives. In addition four to six weeks of postpartum care and family planning was provided to all women in the Nurse-Midwifery caseload and to noncaseload patients in Satellite Clinics.

The Research Committee, which was formed the previous academic year, continued to develop an increased awareness of nursing research and to update faculty knowledge of the research process. The Committee sponsored eight Seminar/Journal Club offerings. Five of the seminars comprised a series entitled, "Research Update for Nurses," which was attended by both faculty and nurses from area hospitals.

Much needed renovation has been done in offices and classrooms to accommodate the educational needs of students who will be ad-

mitted to the Graduate Program this fall. The College, however, continues to need a modern educational facility due to the many built-in inadequacies of the present building.

COLLEGE OF ALLIED HEALTH SCIENCES

Professional training was provided in 23 allied health options during the reporting period. Included were 13 Upper Division programs operating at baccalaureate, graduate and advanced certificate levels and nine Lower Division offerings at the two year associate or one year diploma levels. All Upper Division programs operated at the junior (third) year or beyond, entirely under the auspices of the Medical University of South Carolina; whereas, Lower Division programs were conjointly sponsored and operated with Trident Technical College.

One program, Extracorporeal Circulation Technology, was phased out of the Lower Division and upgraded to a baccalaureate degree effort in the Upper Division under a similar name following approval of the change by the S. C. Commission on Higher Education. Students have been accepted for the fall semester.

A significant contribution to health care delivery occurred through the efforts of personnel in the Radiologic Technology Upper Division Program. This unit, which operates at the baccalaureate level, implemented a long planned curricular addition in Radiation Therapy thus allowing broadened training beyond the already existing diagnostic preparation. Several Radiologic Technology students availed themselves of this training. Further curricular additions were structured in Nuclear Medicine and will be available to baccalaureate level students in fall, 1979. These much needed additions will allow the Program to produce more broadly prepared graduates, capable of accepting a wide range of responsibilities. Such graduates will be very useful in small hospitals as well as in other delivery system settings. It is anticipated that six students will take training each year in these selective areas, qualifying themselves beyond the diagnostic preparation required of all enrollees in the Radiologic Technology Baccalaureate Program.

The Master in Health Sciences Program, which graduated its first student in June, made significant strides during the reporting period. The graduate student body increased to a maximum of 29, consisting of one full-time and 28 part-time persons. Of historical note, the student completing her studies this year was the first graduate in South Carolina to finish a graduate program structured specifically

for traditional allied health professionals. Though assigned to temporary and very limited physical quarters, this program represents an established need for advanced preparation and will attract a total of perhaps forty students for the next academic year based on current applicant interest.

Total opening day enrollment reached the highest level in its history, 593. This figure included 321 in the Upper Division and 272 in the Lower Division. The attrition rate was the lowest in a number of years, so that the number of graduates reached a new high of 264. The employment rate for graduates again was nearly 100 percent. Exit interview findings indicated that perhaps 80 percent of the graduates intended to remain in South Carolina.

Significant interinstitutional activities continued to contribute importantly to College operations. Most notable were the endeavors within the local Consortium. Conjoint Lower Division programs operated most effectively with Trident Technical College, involving 250 plus students enrolled in nine training areas. Upper Division students utilized available Consortium courses rather extensively, particularly at the College of Charleston.

Extensive contacts were maintained with other State colleges and universities because the Upper Division is dependent on feeder college support at the junior year or beyond. Thus, activities centered on making freshman and sophomore students, as well as career counselors, very aware of Medical University of South Carolina two year plus two year type programs, their prerequisites and how to apply. This effort produced positive results as the total number of applicants for the programs again exceeded all previous years for the Upper Division.

Scores on entrance tests, grade point ratios and other entry data indicated that applicants for the past year to Upper Division Programs performed slightly above the national academic averages and considerably above the South Carolina average. Lower Division applicants generally ranged near the State averages and represented an improvement over previous years.

Continued participation in various health careers programs, visitations to the State campuses, presentations at high school level programs and the bringing to the campus of students and faculty/counselors from other institutions have all provided necessary exposure and visibility for the College.

College faculty, students and graduates were involved in numerous projects outside their basic campus educational efforts. Sig-

nificant contributions were made locally, statewide and nationally in the area of professional continuing education. Several faculty members were elected to responsible professional offices, again at all levels. A number of graduate programs were completed by College faculty members during the reporting period, thus broadening general preparation backgrounds. Graduates of this College's programs generally performed above the national average in licensure, registry or certifying competitive examinations and were reported to perform well in their first job settings.

STUDENT LIFE ACTIVITIES

The Financial Aid Office, in drawing its student economic profile, found that the representative undergraduate student was single, dependent on parents for financial support, from an income background between \$15,000 and \$18,000, and showed an average financial need of \$2,400. The representative graduate/professional student was single, evenly divided between independent and dependent status; came from a family income range between \$24,000 and \$30,000, or had a working spouse with an average income between \$7,400 and \$9,000. The average financial need was around \$4,500. The average indebtedness was \$6,000 for undergraduates and \$25,000 for graduate/professional students.

The Financial Aid Office assisted some 925 students enrolled in the six colleges of the University during the academic year, the financial assistance being provided primarily in the form of federal or federally-guaranteed loans. The total from all sources, governmental and private, was \$4,000,000.

The most readily available money has come from contractual agreements with the Armed Forces, National Health Service Corps, or the South Carolina Physicians/Dental Scholarship Program, but these agreements do pose their problems. For example, students may be required to make career decisions too early in their academic programs or to accept residencies in areas not of their choice. The alternative is high interest bearing loan programs. This dilemma points up the critical need for additional private scholarship funding.

The need for a Student Center Building to include food services, athletic, recreational and social facilities, and to serve as a base for student activities has also become more critical. A Student Center Task Force has recommended that such a center be constructed as soon as possible. Sources of funding are being sought and planning for a student center is under way.

Student housing remains a problem. A Student Housing Task Force was established by the Long Range Planning Committee to study the matter and make recommendations for University action. The Task Force is expected to produce its final report within the next two months. Preliminary data suggest that the University must become involved in providing student housing to a greater extent than it now does.

The Medical University will again join the College of Charleston in sponsoring the Community Concert Series. In a gesture of community cooperation, an agreement has been reached for the 1980-81 season with the Charleston Concert Association to combine sponsorship of a single series of programs.

UNIVERSITY REGISTRAR AND DIRECTOR OF ADMISSIONS

The development of a central Continuing Education enrollment records system was implemented. With the growth of Continuing Education programs, central University recording of CE credit for official reporting became an integral part of the University student records system.

With the conversion in June 1979 from the quarter to the semester system, major attention was given to the conversion of student records, curriculum, and statistical reporting systems. The tie-in of student billing with preregistration has developed a continuous system of billing by credit hours.

A staff study of inactive record files indicated a need for revising the microfilm system. Incorporated in the study were new Federal and State regulations involving security and historical standards. As a result of this study a new long-range program for microfilming of student records was adopted. In view of the growth of Federal, State, and internal reports, the development of the student information system received continuous staff evaluation.

The applicant system has been expanded to evaluate overall credentials of applicants. This program has proved very helpful to Admission Committees in making their evaluations.

**MEDICAL UNIVERSITY OF SOUTH CAROLINA
ENROLLMENT
1978-79**

House Staff

Interns—Medicine	96
Residents—Medicine	277
Residents—Dental Medicine	23
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TOTAL	396

College of Graduate Studies

Master of Science	30
Visiting Graduate Students	1
Doctor of Philosophy	81
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TOTAL	112

College of Medicine

First Year	169
Second Year	164
Third Year	166
Fourth Year	165
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TOTAL	664

College of Dental Medicine

First Year	56
Second Year	55
Third Year	49
Special Students	2
	<hr/>
TOTAL	162

College of Pharmacy

Baccalaureate Program	
Third Year	63
Fourth Year	69
Fifth Year	48
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TOTAL	180

Doctor of Pharmacy (Pharm. D.)

Fifth Year	12
Sixth Year	12
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TOTAL	24

College of Nursing

Baccalaureate Program	
First Year	79
Second Year	70
Third Year	104
Fourth Year	84
Special Students	23
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TOTAL	360

Nurse Midwifery Program	17
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TOTAL	377

College of Allied Health Sciences

Master in Health Sciences	21
Baccalaureate Programs	212
Associate Degree Programs (Joint Programs with Trident Technical College)	196
Certificate Programs	144
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TOTAL	573

TOTAL ENROLLMENT	2,488
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**MEDICAL UNIVERSITY OF SOUTH CAROLINA
DEGREES AND/OR CERTIFICATES CONFERRED
1978-79**

House Staff

Certificate

Residents—Medicine	106
Residents—Dental Medicine	10
Interns	37
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Total	153

Graduate Studies

Doctor of Philosophy	13
Master of Science	12
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Total	25

Medicine

Doctor of Medicine	164
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Dental Medicine

Doctor of Dental Medicine	51
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Pharmacy

Doctor of Pharmacy	12
Bachelor of Science	48
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Total	60

Nursing

Bachelor of Science in Nursing	83
Nurse Midwifery Certificate	10
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Total	93

Allied Health Sciences

Master of Health Sciences	1
Bachelor of Science	
Cytotechnology	12
Dental Hygiene	12
Medical Record Administration	12
Medical Technology	20
Occupational Therapy	14
Physical Therapy	17

Radiologic Technology	2
Respiratory Therapy	9
	<hr/>
Total	99
Certificate	
Anesthesia for Nurses	6
Orthoptics	1
Physician's Assistant	22
Dental Assisting	30
Dental Laboratory Technology	11
Extracorporeal Circulation Technology	1
Histologic Technique	7
Histotechnology	4
Medical Laboratory Technique	6
Ophthalmic Technician	6
Practical Nurse	32
Radiologic Technology	13
Respiratory Therapy	4
	<hr/>
Total	143
Total Graduates	788

OFFICE OF RESEARCH AND SPONSORED PROGRAMS

This office, which provides the processing of all applications and administrative support for all extramural awards made to the University, gained a new full-time Coordinator of Research this year. Under his direction, an extensive reorganization was carried out. The Institutional Review Board and Institutional Biosafety Committee and supporting staff were transferred into the office; a Deputy Coordinator of Research was appointed and staff organized, and the post of Associate Coordinator for Research and Program Development was created.

The strengthening of operations proved very timely as the office was called upon to process a record number of applications (434) and to administer a record number of awards (216). The latter represented a record obligation of \$9,841,078 in direct costs for research and sponsored programs. It also represented a tripling of the workload over the past five years.

To assist in the monitoring of this large system of applications, awards and administration, a new computerized information system

is being implemented. In addition to numerical totals, it provides a breakout of funds and programs for analysis. It will also provide the capability of tracking the research interests and experience of faculty members, their applications for extramural funding and the administrative actions on all of these applications and awards. In addition, it will be capable of synthesizing the accomplishments and potential of research by specific disciplines. With the progress to date, this program should be fully operational by the fall of 1979.

Communication with the University community was enhanced by the initiation of a monthly newsletter, *Reflections on Research and Sponsored Programs*. This new form of information exchange was met with enthusiastic response from the investigators. It is presently being expanded to include information on grants accounting as well as a section for the announcement of special guest lecturers.

In an additional effort to assist investigators to be more effective in seeking extramural support, two seminars were presented, entitled "Grants for Sponsored Research: A Survey of the System" and "The Development of a Proposal". A total of 170 faculty members attended.

The amount of time and effort put into an application is significant and all resources available should be used to optimize the success rate for that time and effort. One of the new functions of the University Research Committee will be to establish an organization on campus whereby investigators can submit their applications for a peer review prior to submitting them for an external evaluation. While this review will not be mandatory, it is hoped that the service will prove itself by significantly increasing productivity.

Over the past nine years, the State has provided research funds to the University which have been primarily used to assist in the development of new investigators. A review of this program shows that over this period there have been small grant awards made to 152 different members of the faculty. It was found that 47 of these individuals, or approximately one-third, received new or additional grant support from extramural sources *subsequent* to the funding provided through their state award. This indicates that indeed a substantial number of new investigators can obtain extramural funds through state "seed" money.

A study was carried out comparing the total number of National Institutes of Health postdoctoral fellowships at 13 medical institutions. A "best fit" line through the data indicated that the Medical University may have only half the number of postdoctoral

positions appropriate to present research dollars. A plan for expansion of the program is in the process of development by this office.

The increase in number and complexity of federal regulations is requiring more communication with investigators as to the procedures through which the University committees are implementing these regulations. For example, the workload of the Institutional Review Board, which conducts the special reviews of applications involving human subjects, has tripled in the past six years. This past year, new regulations governing Biosafety in research required that a new Institutional Biosafety Committee be formalized. At the present time, new federal regulations governing the use of animals in research are also being implemented. All have potential impact on a researcher's project.

There has been a steady growth of extramural funds for research work both here and at the Charleston Veterans Administration Hospital. Clearly the trend of the research program is very encouraging and it is anticipated that within the next five years the total research program will increase by two or three times in current total dollar value. This continued growth will require special consideration of issues such as space, equipment, and interdisciplinary programs. Through proper planning and policy development, this growth in research can be significantly enhanced.

DRUG SCIENCE FOUNDATION

Establishment of a non-profit Drug Science Foundation to foster new drug development and improved therapeutics and patient care has been attended by notable success.

Following are some of its recent achievements:

Agreement has been entered into with a prominent chemical company for collaborative basic research to effect new drugs for the treatment/prevention of cardiovascular diseases.

A national Council of Scientific Advisors has been created to provide guidance for programs here and elsewhere.

A Medical University-College Consortium Program has been initiated through which the Foundation provides up to 20 three-month Academic-Industrial Research Fellowships for undergraduate college students each year. Current members of the consortium are Furman, Lafayette, Trinity, Antioch and Goucher Colleges and the Lilly, Burroughs-Wellcome, Dow, Roche and Upjohn Companies.

The Foundation has helped devise a new institutional patent policy for the University.

At the request of the Foundation, 23 separate reviews and critiques of its programs have been received from distinguished scientists. The visits of these consultants have included open seminars offering intellectual stimulation to both faculty and student body.

OFFICE OF EDUCATIONAL SERVICES

Working with more faculty from more departments and programs than in any previous year, the Office of Educational Services produced an array of consultative services ranging from very technical assistance in the development of grading schemes for courses with large and diverse enrollments to assistance in the development of better visual materials for lectures. The Office's responsibility for providing courses in educational methodology continued to expand. As noted in the past, this is a major change in responsibility.

In 1978-79, the Office of Educational Services (OES) assisted faculty from five colleges and Medical University Extension Programs in the development of self-instructional materials and materials directly related to the organization and function of a course. Included in this were self-instructional modules. Many of these were composed of several sub-units. In almost all instances, these materials were developed as a part of an existing course.

In support of the Medical University Hospital, a self instructional course in Cardio Pulmonary Resuscitation (CPR) was developed. The course, which utilizes a mannikin simulator, videotape, and self study materials, has been used by the hospital to train house staff as well as University faculty. All freshman medical students were also required to complete the program.

In cooperation with the Library Learning Center, the OES continued its program of audiovisual instructional materials appraisal. Faculty were regularly advised of the availability of new materials, and arrangements were made for preview and appraisal of those materials selected.

Personalized Assessment of Course Effectiveness (PACE) this year became a requirement for all core courses in the College of Medicine, Dental Medicine, and Pharmacy. The system was used voluntarily by instructors in Allied Health, Nursing, and Graduate Studies. Altogether, 135 courses, involving 211 instructors and 5,451 students, were evaluated.

The Office of Education continued to coordinate the evaluation of all senior electives for the College of Medicine.

The Student Examination Evaluation Program (SEEP), available to all faculty and processed by the Computer Center, scored ap-

proximately 50,000 test papers, a 30 percent increase over the previous year. An extensive report for each test was generated for the instructor and included student scores, test statistics, and item analysis. This report allowed the instructor to evaluate both student performance and test quality. A recent change in the report's format improved its legibility and the accessibility of results.

Overseeing the system involves guiding and testing program revisions, designing, maintaining inventory for and distributing answer forms, and informing current and potential faculty users about the provisions and procedures of the system. This information is provided to individuals and to department groups when requested, as well as in OES-sponsored seminars open to all faculty. Two such seminars were presented this past year.

A series of workshops for university faculty drew attendance of 108 from five colleges. The OES staff conducted six workshops for Area Health Education Center (AHEC) Programs throughout the state and also gave workshops on the improvement of instruction for the state associations of Medical Technicians and Physical Therapists.

Under the leadership of the OES, a computer based State Wide Needs Assessment (SNAP) was developed for AHEC and University Extension Programs. To date, SNAP has been used with dentists, nurses, dietetic assistants, and food service supervisors. This program has involved some 2,500 persons in the state. This is indicative of the growing support provided by OES for all University activities.

Art, Cinematography, and the administrative section of the Division of Audiovisual Production were relocated this spring to the Summerall Center. The Photography Section which presently experiences severe congestion will receive important relief when it moves to Summerall this fall.

LIBRARIES AND LEARNING RESOURCE CENTER

With increased funding this year, the Library began returning from a level of minimal curriculum and research support to the more desirable and appropriate status of a well-rounded research and teaching collection in all areas of the health sciences. The strengthened original materials budget provided for major retrospective buying of monographs and serials backfiles, as well as additional subscriptions to new journals.

During 1978-79, a total of 6,602 monographs, bound journals, and audiovisual titles were added to the collection and 2,243 current

journals were received. At the close of the fiscal year, the collection contained 128,117 items, including 3,556 audiovisual packages and 124,561 monographs and journal volumes.

Of special interest is the healthy growth of the Learning Resource Center into an integral teaching support unit, with 15,622 reserve audiovisual packages being viewed in the center this past year.

Meanwhile, the Reference Staff and the Extension Office completed 3,871 manual searches; MEDLINE and BRS computer searches numbered 5,619, an increase of 24% over 1977-78. The Interlibrary Loan and Extension Offices provided 12,126 monographs or photocopies of journal articles to users throughout the state and the Southeast, and 1,842 items were borrowed for Medical University faculty.

The Extension Office answered 334 reference queries, executed 591 MEDLINE searches, and provided five South Carolina hospitals with consultant services. There were 162 first-time users of Extension Services.

The Library provided periodical holdings data for inclusion in the *South Carolina Union List of Medical Periodicals*, a list of the periodical holdings of the major health sciences libraries in the State. This list, prepared and published by the School of Medicine Library of the University of South Carolina, represents a significant statewide cooperative effort.

During the year, the Library made the decision, with administrative support, to join SOLINET: the Southeastern Library Network, Inc. Membership allows access to OCLC, Inc., which operates a nationwide on-line library system for academic, public, and special libraries (over 2,000 libraries in 49 states participate). The overall goals of this system are increased availability of library resources for library users and cost reduction of the production of bibliographic records. Initially, the production of cataloging records through the on-line system is this library's immediate need, but SOLINET will benefit all aspects of library operations.

The Reference Staff, in cooperation with the Office of the Coordinator of Research, initiated a program through which all principal investigators of funded grants are provided with computerized bibliographical updates in their research areas.

In conjunction with the Dean of Graduate Studies and University Research, a Research Collection Advisory Committee is being established. This committee will advise the acquisitions staff in the selection of books and journals to insure the maintenance of research level collections in all areas of University interest.

In 1979-80, the Library will begin to provide bibliographical support to South Carolina physicians using the Medical University's Medical Information System via Telephone (MIST).

The Library again received support, in the amount of \$9,257, from the Southeastern Regional Medical Library Program for providing information to institutions and individuals in the Southeast.

LIBRARY AND LEARNING RESOURCE CENTER STATISTICS — 1978-1979

Holdings:

Total Holdings*, June 30, 1978	121,837
Added, 1978-79	6,602
Withdrawn, 1978-79	322
Total Holdings*, June 30, 1979	128,117
Periodicals Currently Received	2,243

Number of Interlibrary Loan Transactions:

Incoming	1,842
Outgoing	12,126
Total	13,968

Circulation:

Journals	37,589
Monographs	33,719
Audiovisuals	1,571
Total	72,879

Budget:

State Appropriations—Library	\$ 665,139
LRC	83,919
Total	\$ 749,058

* Monographs, bound journals, audiovisual packages.

WARING HISTORICAL LIBRARY

Renovation of the second floor of the Waring Historical Library was completed. Wooden shelving from floor to ceiling was installed along the walls of the building, emphasizing its octagonal shape, and exhibit cases were built for the center of the room. While adding to the convenience and attractiveness of the facility, the new arrangement has added ten percent more shelf space for books.

Crowded conditions were also partially alleviated when room was made available in neighboring Colcock Hall for a workshop for book and manuscript repair and a small storage area.

An exchange of duplicate books was carried out during the year. Several bookdealers participated in the bidding and gave the library credit which was used for purchases. Another exchange was made for the rebinding of some twenty books for duplicates.

Approximately 300 books were added to the collection this year, of which 35 represented purchases. One gift of note was a collection of thirty-four 17th, 18th, and 19th Century books from Dr. J. Preston Darby of San Angelo, Texas, an alumnus of the College of Medicine. The works of Ambroise Pare, published in 1634, a most valuable acquisition, were included in this group.

Other gifts were the microscope, books and instruments of Alphonso R. Harold, M.D. (1867-1963), a gift of his grandson, Dr. Frederick A. Carpenter of the Department of Anesthesiology, and memorabilia relating to Mrs. Anna DeCosta Banks (1869-1930), former head nurse of the Hospital and Training School for Nurses on Cannon Street in Charleston, a gift of her daughter, Mrs. Armistead B. Harrison. The latter collection includes eight issues of *The Hospital Herald*, one of the earliest medical journals in the country produced by black physicians. A set of surgical instruments with ivory handles in a wooden case which belonged to Isaac W. Angel, M.D., class of 1855, was presented by Mrs. H. J. Stuckey of Charleston.

A loan of about one hundred 19th century books in the social and health sciences, which had been housed in the Hammond-Billings Library at Redcliffe in Beech Island, S. C., was received from the South Carolina Department of Parks, Recreation, and Tourism. A complete listing of the gifts of the Waring Historical Library appears quarterly in *Library Notes*.

Sixty-one researchers used the library during the year. Besides members of the faculty and staff of the University and other people from Charleston, the researchers included professors in history from

the Universities of Georgia, Florida, South Carolina, North Carolina, Virginia and from two universities in New York. Some subjects of interest were colonial physicians of South Carolina, public health, psychiatry, and dentistry in South Carolina, student medical theses before the Civil War, and medical care of slaves. Fifty-four letters of inquiry and many telephone requests were answered during the year, mostly questions about ancestors who had graduated from this medical school. The Anna Banks material drew several inquiries.

The Waring Library Society, an organization of "friends" of the library established to help with the development and expansion of the library, had its first successful year with a total of 285 members and a well attended first Annual Meeting in March at which Dr. George E. Gifford of Boston presented a paper.

A new system of cataloging the books of the Waring Library was started through the coordination of efforts of the main library staff and the Waring staff. This will be an ongoing project of many years duration.

STUDENT-EMPLOYEE HEALTH SERVICES

The planned administrative reorganization of Health Services was carried out this year, the unit becoming a division of the Department of Medicine under the directorship of Dr. Allen H. Johnson, Director of Internal Medicine. Supervision of daily medical activities was handled by Dr. Patricia I. Peeples and Dr. W. W. Seymour.

The unit was responsible for 24-hour outpatient medical care for 2,488 students (including 396 Housestaff), and occupational health care for 5,254 employees.

Among other changes, after-hour coverage was relocated from the Radiation Therapy Department, first floor of the Medical University Hospital, to the University Comprehensive Health Center, second floor of the Clinical Science Building, Module number 6. The after-hour Health Service nurse was also utilized by the University Comprehensive Health Center physicians.

Health Services experienced a very active year as 18,994 outpatient visits were recorded, an increase of 2,419 over last year. Students made 8,305 visits; employees, 10,689, and visitors, 50 visits. Thirty-one patients were seen at the University Comprehensive Health Center. Of the total visits, 3,081 were made after regular working hours, on weekends and holidays. The hospital medical residents saw 286 patients.

There were 735 admissions to the outpatient sick list for a total of 2,019 sick days.

Of the 1,358 tuberculin skin tests made on students, 16 were initially positive and 24 were converters. There were 1,586 tuberculin skin tests on employees, of which 63 were initially positive and 5 were converters.

There were 172 lost time accidents, resulting in a loss of 1,194 work days, and there were 59 restricted days lost. The total number of visits for all service related injuries was 1,033.

The Student Mental Health Program, under the direction of Dr. Oliver Bjorksten, provided 147 hours of therapy for 56 students.

As for inpatients, there were 20 student hospital admissions for a total of 82 hospital days compared to 16 admissions for a total of 106 hospital days last year.

Premiums for student group Blue Cross-Blue Shield Health Insurance increased from last year: Single-\$135.44 (\$106.04), couple-\$484.00 (\$379.00), Family-\$673.36 (\$527.30) including maternity. The Pilot Life Insurance Company group policy, with less comprehensive coverage, required premiums of: Single-\$79.50 (\$71.50), Couple-\$198.75 (\$178.75), Family-\$278.50 (\$250.25) add \$100.00 for maternity. The Student Health Fee remained at \$15.00 a year.

There were no changes in the Preventive Health Program. Dr. Seymour continues to represent the Health Services on the University Hospital Infections Control Committee.

MEDICAL UNIVERSITY HOSPITAL

Operationally, the Medical University Hospital was significantly involved in the National Voluntary Effort to Contain Health Care Costs by means of a thorough and careful evaluation of all expenditure requests and the monitoring of activities on a departmental basis. Patient charges were increased only 3.7% from 1978 to 1979. In contrast these charges had increased 14.1% the previous year. From 1978 to 1979 expenditures increased only 8.6% while the national expenditure rate of increase was 12.8%. In contrast, expenditures at the hospital had increased 17.2% the year before. The length-of-stay average decreased from 7.4 days in fiscal year 1977-78 to 7.3 days in 1978-79.

Financially, it was a very sound year for the Hospital. Cash collections from generated operating revenue totaled \$38,067,508. This represented a 13.2% increase in available cash while rates charged patients again remained stable. The hospital expended \$51,600,000 including \$2,520,041 for medical equipment.

In the fall of 1978, a major effort was begun to evaluate the activities of the Private Diagnostic Clinic, resulting in several significant

changes. The private practice of the Department of Obstetrics and Gynecology has been moved from trailers to the Clinical Science Building. This shift has allowed a consolidation of registration and laboratory activities. Another change has been the installation of a central scheduling system. Initial results, including the elimination of the need for some personnel, have been encouraging.

In December 1978, the Hospital's University Comprehensive Health Center started accepting patients. This unit, which is located on the second floor of the Clinical Science Building, was designed to replicate a community group practice. The major objective is to provide for the education of primary care residents in internal medicine and pediatrics. Partial funding is provided by a Federal Training Grant.

The Department of Nursing continues to improve in the quality of patient care. In keeping with this effort, 54 Registered Nurses were added to the staff during the fiscal year. This represents a sizable increase and brings the number of Registered Nurses employed to an all-time high of 393. The increased need for Registered Nurses can be attributed to the medical advances in the care of the patients in the Critical Care Units. Technology has increased at a rapid rate and therefore, the staffing and management of patient care requires the knowledge and expertise of Registered Nurses.

A newly constructed Neonatal Intensive Care Unit was opened. This unit provides service for the neonate and intermediate care infant, utilizing the latest developments in medical technology. This unit requires a staffing complement of 38 Registered Nurses trained in neonatal skilled care.

A central Transportation Service has been established within the Department of Nursing. This service provides a central transportation pool which is available 24 hours a day, seven days a week. The service is available for all hospital departments and provides for the transportation of:

1. Patients to and from any area within the University complex.
2. Specimens to any area within the University complex.
3. All newly admitted patients to their assigned rooms.
4. All patients who are discharged to their vehicles.
5. Blood and blood products from the Blood Bank Laboratory to the Hospital Blood Repository.

The availability of the transportation service has decreased the number of stat laboratory requests ordered by the physicians; improved the image of the hospital by the personal attention to all patients on admission and discharge; reduced the amount of time a patient must wait in x-ray and other departments; and improved the continuity of patient care on the nursing unit since staff no longer leave the unit to accompany patients to other areas of the hospital.

A Parenteral Therapy Team was developed within the Department of Nursing providing a 24-hour, seven-day-a-week service. The team is composed of specially trained Registered Nurses who provide service for all patients receiving intravenous therapy, blood transfusions, hyperalimentation and nutritional support. This service has reduced the number of intravenous restarts; reduced infection by regular changing of intravenous dressings, lines and sites; relieved the House Staff of this time consuming function; and improved the accuracy of record keeping. The Parenteral Therapy Team functions in conjunction with the Department of Pharmaceutical Services.

An Outpatient Surgery service was developed in February, 1979. This service enables a patient to be admitted and have the surgical procedure, recovery and discharge on the same day. The operation is performed in the fourth floor Operating Room suite. The patient then goes to the Recovery Room until released by the Anesthesiologist. Many surgical procedures can be accomplished on an outpatient basis, a prospect which is more acceptable to the patient than a hospital stay.

Of particular significance to the University Hospital was the extensive work accomplished on the planning and design work for the East Wing Addition—Children's Hospital, a proposed 10-story, 326,500 square-foot facility. This addition is designed to house a self-contained pediatric hospital with clinical, research, and support services atop a four-level service base to serve both the Children's Hospital and the existing Medical University Hospital.

Remodeling of the Medical University Hospital continues with approximately \$3,000,000 in construction completed involving a new cafeteria facility, new ambulance entrance, a 30-bed Neonatal Intensive Care Nursery, and major renovation of the Radiology Department including the development of a new Nuclear Medicine unit. Additional funding is available to construct service bridges to the rear of the building on floors two through ten permitting the rerouting of support services and functions from existing corridors. Con-

struction is expected to begin in the fall of 1979 with completion projected for June, 1980.

Additional funds have been requested from the legislature to continue the renovation of the original hospital building (\$2,600,000 for fiscal year 1979-80 was approved by the legislature) to include physical facility refurbishment and complete redevelopment of the heating, air conditioning and mechanical systems over a five year period.

Other important efforts to upgrade facilities that have taken place in the past year include: general refurbishment of the labor and delivery area; refurbishment of the lobby/reception area; establishment of a 22-hour food service in the cafeteria for personnel (which includes a fast-food service in non-peak serving times); general refurbishment of the medicine floor; development of a new gift shop and volunteer services facility; renovation and development of Medicine and Pediatric Primary Care Clinic modules; renovation and refurbishment of space that provides additional patient rooms on various floors of the hospital; and continued bathtub replacement as a part of a total replacement program.

New renovation projects underway include the Admitting Office and patient receiving area (both to be completed by fall of 1979); modernization of the two x-ray rooms (including new equipment) in Radiology; development of a new Pediatric Catheterization Laboratory, including equipment; completion of a new cart lift for the Food Service Department which will provide a dedicated cart system for that department and help ease other vertical transportation in the hospital, and the purchase and installation of a new food-cart system compatible with the food-cart lift system. All construction, whether a renovation project in the original hospital or new construction planned for the hospital addition, is consistent with the long-range master plan developed for the University Hospital complex.

MEDICAL UNIVERSITY HOSPITAL AND CLINICS STATISTICAL SUMMARY

For the 12 Months Ending June 30, 1979

Beds and Bassinets Available	535
Patient Days:	
General Nursing Units	119,773
Special Care Units	9,566
Nursery	13,934
Total	143,273
Average Census	392.5
Average Census—Nursery	38.2
Average Length-of-Stay	7.3
Average Length-of-Stay—Nursery	4.1
Percent Occupancy	73.4
Patient Admissions	20,141
Clinic Visits:	
MUH Clinic	97,368
Cancer Clinic	7,400
Cardiac Clinic	1,809
Family Practice Unit	27,959
Eye Clinic	7,291
Private Diagnostic Clinic	46,229
Total	188,056
Surgical Procedures	7,582
Number of Deliveries	3,096
Clinical Pathology Procedures	668,131
Anatomical Pathology Procedures	79,352
Diagnostic Radiology Procedures	83,355
Therapeutic Radiology Procedures	20,814
Nuclear Medicine Procedures	4,425
Physical Therapy Procedures	28,084
Meals Served:	
Patient	357,236
Cafeteria	644,390
Total	1,001,626
Pounds of Laundry	1,303,743
Number of Employees	2,317

MINORITY AFFAIRS

Office of Affirmative Action

In the first operational year of the Affirmative Action Plan, all current federal contracts were checked and found to be in compliance. The results were registered with the Regional Office of Civil Rights in Atlanta.

Discrimination complaints of employees were limited and all were processed internally without having to proceed to formal hearings. Thus, the internal grievance mechanism being used on a trial basis was determined to be effective.

An analysis of the university-wide work force indicated the University is moving along the accepted level set out by the Labor Department; that the University continues to employ, refer and interview individuals at a rate consistent with the makeup and employability of the people of the Charleston area. Any recruitment problems have generally been at the higher professional level of faculty and administrators. In response, the University has activated a permanent minority faculty recruitment committee to serve as a clearinghouse for credentials of possible faculty and staff.

All employee vacancies have been filled according to procedures duly adopted and kept on file in the Affirmative Action office. The unclassified (faculty) portion is processed by the Office of Affirmative Action and the classified employees' recruitment, hiring, selection and placement are processed by the Department of Personnel Services. Statistics on termination indicate that employment attrition is in line for an institution of this size.

Continued attention will be directed to revision of the stated Affirmative Action Plan and maintaining an excellent advisory committee and executive staff. More active involvement with department and division heads in the academic sector will be encouraged and also close monitoring of the system to assure university compliance with Titles VI, VII and IX.

Minority Programs

As University programs dealing with minorities continue to mature, progress is being noted in the attraction and retention in particular of practicing black physicians in South Carolina. The number of black physicians in the state has risen since 1975 from a total of 37 to the current 61.

But the magnitude of the overall task of black health professional recruitment remains large. The state was only able to add five new

dentists, now totaling 44, since 1975, and there are still only 26 registered pharmacists. It appears there are still only some 600 registered black nurses out of a state total of 13,000 to 14,000 registered nurses.

Consequently the University sees the need to continue strong emphasis on its commitment to upgrade health care delivery to minorities by minority practitioners. One of its most effective instruments in achieving progress is the Pre-Health Council made up of coordinators from each of the regional campuses and the accredited black colleges in the state. Through efforts of these individuals, students at the undergraduate level interested in health professions are guided toward their goals with the ultimate aim of taking their professional studies and practicing in South Carolina. The activities and programs have been many. The Pre-Health Council presented a Medical College Admission Test program, sponsored a humanities in medicine program, discussed the effects of the Weber case on the black student, conducted the sixth Summer Pre-Health Council Symposium, honored the parents of all minority students, and conducted the annual Summer Health Careers Program for its sixth consecutive successful year, with 42 representatives from accredited colleges.

Also, the Student National Medical Association and the Minority Student Union shared their health awareness project with the Minority Affairs Office by adding a recruitment component to their program. Until December of 1976, the Student National Medical Association represented the only organized minority group at the university and was limited constitutionally to medical membership. The Minority Student Union was founded to plan and encourage activities that are socially, culturally, and educationally enriching to the membership and the university community. The organization has been quite active hosting seminars, studying health issues and carrying out community activities.

In accordance with goals adopted at the Santee Planning Retreat in May, the Office of Minority Affairs has formulated plans which include (a) computerized employment and academic information available throughout the University in conjunction with the South Carolina Employment Security Commission; (b) continuation for at least two more years of the Minority Student Union with increased emphasis on academic support; (c) development of extended academic support through University faculty; and (d) continued cooperation and coordination between University Library facilities and Pre-Health Council School Libraries.

DIVISION OF CONTINUING EDUCATION

Continuing to reach out to wider and wider audiences, the Division's Health Communications Network this year transmitted a highly acclaimed five-part series on Epilepsy through the National Satellite Network of the Public Service Satellite Consortium.

Produced in cooperation with the Medical University's Department of Neurology and carrying continuing education credits, the Epilepsy series was broadcast into 300 cities in 40 states, the Virgin Islands and Puerto Rico directly from the Medical University studio. Such series have been utilized to develop public information programs for national broadcast.

Regular telecasts with two-way video and audio interchange between faculty of the Medical University and the National Institutes of Health also were provided, in addition to the very popular 85 hours of programming each month for South Carolina hospitals, nursing homes and public health centers.

The Division was kept busy by its sponsorship role in 110 conferences which drew a total attendance of 12,407 physicians, nurses and other health professionals. A number of the conferences involved "live" demonstrations, thereby allowing participants to benefit from "hands on" learning situations. With this continuing acquisition of relevant knowledge and skills, there will be an improvement in the health care of the citizens of South Carolina.

Mini-residencies, another of the Division's accredited activities, gave practicing physicians a chance to return to the teaching hospital environment for one to four weeks. The individual physician outlined in advance the specific field in which he desired to study and a program was prescribed for his particular needs. Complementary benefits included opportunities for faculty consultation, use of the University library and learning new techniques and procedures.

The Division maintained a roster of speakers and their topics, and worked closely with county medical societies and other organizations in developing programs to meet both their specific needs and credit requirements.

The Dean and his staff also extended support to the faculty of the Medical University for their planning, implementation, accreditation, and evaluation of continuing education activities. South Carolina's health professionals may utilize the Division's resources for supplying information concerning their local and national continuing educational endeavors.

The Division of Continuing Education is accredited by the Liaison Committee on Continuing Medical Education of the American

Medical Association and is responsible for the correct designation of the American Medical Association/Physician Recognition Award category and hours of credit for the programs it sponsors or co-sponsors. Also, the Division, as defined in Standard IX of the Standards of the College Delegate Assembly of the Commission on Colleges of the Southern Association of Colleges and Schools, is accredited to offer continuing education units as the basic unit of measurement for an individual's participation in an institution's offering of non-credit classes, courses and programs.

HEALTH COMMUNICATIONS NETWORK

Programs Produced for Open and Closed Circuit Television	89
Telecasting Open Circuit ½ Hour Programs	52
Broadcasting FM Radio ½ Hour Programs	52
Telecasting Closed Circuit (hours)	1,014
Videocassettes Requested	1,318
Audiocassettes Requested	856
Open Circuit Viewing (Adults Estimated)	440,000
FM Radio (Adults Estimated)	46,000
Closed Circuit Viewing	15,305
Videocassettes	7,438
Audiocassettes (Program, Taping, Dubbing)	856

CONFERENCE PROGRAM ATTENDANCE

July 1, 1978 - June 30, 1979

	In-State	Out of State
Physicians	7,551	2,550
Allied Health	447	248
R.N. - L.P.N.	1,263	47
Other	269	32
	<hr/>	<hr/>
TOTAL	9,530	2,877
GRAND TOTAL		12,407

Continuing Education Courses

Date	Name of Program	Attendance
July 13	Communication Effectiveness	8
July 22	Case Studies in Immunohematology	59
July 31-Aug. 4	Sixth Annual Beach Workshop	238
Aug. 10-Oct. 12	Basic Supervision	20
Aug. 11-13	Family Practice Intensive Recertification Review Course	56
Aug. 17-20	5th Annual Meeting—South Atlantic Cardiovascular Society	110
Aug. 24-27	Fall Meeting—S. C. Chapter American Academy of Pediatrics and S. C. Pediatric Society	62
Sept. 5	Emergency Pulmonary Treatment	36
Sept. 7-10	24th Tri-State Consecutive Case Conference	50
Sept. 11	Thyroid Physiology Testing	16
Sept. 13-15	Review for National and State Certifying Examinations	93
Sept. 15	Choyce Secondary Implant Course	20
Sept. 19	Chemotherapy	21
Sept. 20-22	Insight '78	131
Sept. 21	Family Physician's Substance Abuse Education Workshop	45
Sept. 21-23	Biofeedback in Treatment of Neuro Muscular Dysfunction	23
Sept. 25-29	Eighth Annual Dosimetry Workshop	8
Sept. 25-Oct. 23	Critical Care Nursing	11
Sept. 28-30	Extracapsular Cataract Surgery Course	16
Sept. 29	What's New in Nursing—Eye Trauma	29
Oct. 1-3	Annual Meeting—Southern Psychiatric Assoc.	238
Oct. 3-Dec. 14	Motivational Dynamics	19
Oct. 9	Anaerobic Infection	20
Oct. 12-14	Southeastern Neuroradiological Society	28
Oct. 13-14	Emergencies in Family Medicine	51
Oct. 19-21	Valvular Disease	82
Oct. 25-27	CSHET Fall Conference	35
Oct. 26	What's New in Nursing—Facts about Epilepsy ...	55
Oct. 27	Respiratory Health in the School Age Population ..	37
Nov. 16	Current Approaches to Patient Care—Chronic Lung Disease	21
Nov. 16	Modern Clinical Urinalysis	12
Nov. 29-30	Basic Arrhythmias	52
Nov. 30-Dec. 1	1st Ophthalmic Medical Assistant's Conference—Glaucoma	49
Dec. 1-2	American Cardiology Technologists Assoc. Fall Workshop	50
Dec. 9	Workshop on the Psychopathology of Aging	37
Jan.-April	Neonatal Intensive Care Clinician Program	1
Jan.-April	Continuing Medical Education Seminar	492
Jan. Apr. 11	Motivational Dynamics	8
Jan. 12	Nursing Care of the Neurological Patient-Acute Head Trauma	41
Jan. 25	Basic Arrhythmia Recognition	45
Jan. 26	Testing with Anti-Human Serums	29
Jan. 26	The Advent of Genetic Counseling in South Carolina	57
Jan. 26	What's New in Nursing—Infection Control	49
Feb. 4-10	Tenth Annual Family Practice Refresher Course ..	65
Feb. 8-10	LREMSC—Lowcountry Emergency Medicine Today	47
Feb. 10	A Lowcountry Anesthesia Meeting	38

Date	Name of Program	Attendance
Feb. 16	What's New in Nursing Home Care of the Neurologically Disabled Patient	43
Feb. 16-17	Symposium on Culture and Health	16
Feb. 22-May 3	Research Update	32
Feb. 27	Advanced Program on Cardio-Pulmonary Resuscitation	82
Feb. 28-Mar. 2	Annual Meeting—Assn. of Academic Psychiatrists ..	73
Mar. 1	Infection Control	45
Mar. 7-9	Nine Non-Internal Medicine Topics for the General Internist	60
Mar. 11-16	American Society for Neurochemistry—10th Annual Meeting	522
Mar. 12	Toxemia of Pregnancy	11
Mar. 14	Legal Aspects of Nursing	74
Mar. 15-16	Utilizing Transactional Analysis in Nursing	14
Mar. 19-20	Diabetes Mellitus	95
Mar. 23	Competency-Based Education: A Philosophy of Learning	80
Mar. 23-24	13th Annual Ophthalmology Conference	86
Mar. 24	A Day in Forensic Pathology	53
Mar. 29-31	Annual Meeting—Southern Society of Anesthesiologists	263
Mar. 30	Legal Implication in Current Nursing Practice ...	57
Mar. 31	Cytology Seminar No. 15	100
April 5	Pediatric Oncology	15
April 10	Death and Dying: Individual Perceptions and Feelings	63
April 11-May 9	Care Plan for Nurses	19
April 18-22	Eighth Postgraduate Course in Surgery	80
April 26	What's New in Nursing—Pressure Monitoring ...	38
April 27-28	S. C. Society of Histology Technicians—Spring Seminar	39
April 28-May 1	International Biomaterials Symposium	407
May 2	IV Drug Incompatibilities	49
May 3-5	1979 American Cardiology Technologists Assn. Meeting	141
May 6-10	Positive Lifestyle Changes	3
May 4	An Update in Rheumatology—A Seminar for Nurses ..	38
May 11-12	Clinical Education Workshop	10
May 16-18	The Wholistic Educator	84
May 24	Management of Obstetrical Complications	29
May 25	What's New in Nursing—Enteral and Parenteral Nutrition	32
June 8-15	Management of Patients with Sickle Cell Anemia ..	21
June 12	Advanced Workshop for Health Care Professionals of the S. C. School of Alcohol and Drug Studies ..	56
June 13	Chemicals: A Mini-Curriculum	11
June 14-15	Early Education and Training for the Hearing Impaired Infant	22
June 15	How to Support the Total Health Needs of the Student	35
June 23	Psychiatry Faculty and Residents Seminar	22
June 27-29	Family Practice Intensive Review and Recertification Course	38
TOTAL		5,668

CREDIT APPROVED DEPARTMENTAL ACTIVITIES

Name of Program	Attendance
Family Practice Teaching Conference and Grand Rounds . .	387
Medicine Grand Rounds	1,002
Neurology Conference	192
Laboratory Medicine Conference	256
Round Table Slide Conference	106
Clinical Pathological Conference	180
Psychiatry and Behavioral Sciences Departmental Conference	381
Department of Psychiatry Child Psychiatry Seminar	38
Department of Psychiatry and Behavioral Sciences Outpatient Case Conference	45
VA Hospital Weekly Psychiatry Diagnostic and Treatment Conference	50
VA Hospital Mental Hygiene Clinic Clinical Conference . .	14
Department of Radiology Conference	711
Teaching Conference in Neuroradiology	412
Urology Grand Rounds	483
Pediatric Grand Rounds	1,350
Visiting Radiologist Mini-Residency	26
Department of Surgery Grand Rounds	134
Cancer Conference	81
Department of Psychiatry and Behavioral Sciences Weekly Psychosomatic Case Conference	144
Beaufort County Medical Society	160
Charleston County Medical Society	375
Kershaw County Medical Society	75
Roper Pediatric Staff Conference	137
TOTAL	6,739

ADMINISTRATION AND FISCAL AFFAIRS

During 1978-79, the Medical University received total State-appropriated funds of \$56,137,909, just under 50% of total revenue of \$112,775,124 for the year. Expenditures for the period amounted to \$109,420,259. Student tuition and fees collected by the Bursar's Office totaled \$1,990,836, an increase of 21% over 1977-78. Savings of approximately \$40,000 were achieved through intensified efforts to take advantage of discounts on accounts payable. An automated tuition accounts receivable and billing system for the College of Dental Medicine was developed and successfully implemented.

By the beginning of fiscal year 1978-79, the University's construction program had reached a leveling-off point, signalled by completion and occupancy of the Clinical Science Building. No major construction projects were in progress during 1978-79. Additional space was acquired by the purchase of an office/professional building in proximity to the campus and by a sub-lease arrangement with the State of South Carolina for a portion of the new Summerall Center. A number of the financial and business functions of the University were relocated in Summerall Center and plans are being developed for use of the professional building on Cannon Street in anticipation of current tenants vacating as leases expire. A permanent President's House was also purchased during 1978-79 when escalating costs made the proposed construction of a house on the Ft. Johnson property impractical.

Extensive renovation of the existing hospital building, which is more than 25 years old, has been underway for several years. In 1978-79 a new ambulance entrance was completed, the neonatal unit was renovated, an improved 13.8 KV electrical switch station was installed and the crawl space under the hospital building was paved. Renovation of the first floor of Buildings E and F of the old Quadrangle was also completed. Contracts were let for minor repairs and alterations costing approximately \$600,000. In addition, Physical Plant staff completed 54 significant renovation/improvement projects and performed routine repair, housekeeping and maintenance work. A considerable backlog of preventive maintenance and repair work has accumulated due to budgetary constraints. An effort to reduce this backlog by establishment of a \$1,000,000 project funded by plant improvement bonds failed to receive approval of the Commission on Higher Education.

The number of persons seeking employment with the Medical University continued to grow and 4,239 persons were interviewed for specific jobs. A total of 6,070 job applicants were given five-

minute interviews for assessment purposes, an increase of 45% over the previous year. The Personnel Services Department continued to provide orientation programs for new employees, to conduct recruitment activities, to offer employee development and training programs (including special skills such as medical terminology, shorthand and typing), to provide fringe benefit information to employees and to handle disciplinary actions and grievance cases.

The Internal Auditing Department audited and verified the eighteen petty cash funds, three check cashing funds and nineteen change funds of the University at least once during each quarter of 1978-79. The department assisted the independent auditing firm in preparing the annual financial audit for the University. In addition, the Internal Auditing staff reviewed various records and activities such as journal entries, back statements, general stores inventories, payroll distribution reports, accounts payable vouchers and student loan receivables.

Over 30,000 purchase orders were issued during 1978-79 by the Purchasing Department. Total purchases for the University were in excess of \$43,000,000.

In 1978-79 the University Parking System included 2,083 spaces: 1,466 reserved spaces, 54 metered public spaces, 22 free "handicap" spaces, 322 free public spaces served by shuttle bus service, and 219 public rental in the Parking Garage. A 68% increase in revenue from visitor parking was brought about during the year by the decision to convert the Parking Garage from metered parking to a ticket-cashier operation.

Two new systems were implemented by the Public Safety Department to increase campus security and further ensure the well-being of University staff, patients and visitors. Alarm systems connected to the Public Safety Communications Section were installed in several key locations. Closed-circuit surveillance cameras, allowing constant coverage by the full-time night dispatchers, were also implemented. State and personal property valued at approximately \$8,500 was recovered by the Public Safety Department during the reporting period.

The Computer Center installed a new outpatient clinic registration and billing system, computerized student tuitions and expanded the student loan, student applicant and student information systems, converted the payroll system from a tape-oriented system to a database system and modified the position budgetary system to reference

the personnel data base and to include the State position number for each employee. In preparation for the larger computer approved by the Budget and Control Board, most of the DOS systems were converted to OS systems and bench-mark materials for the RFP were collected, tested and documented. In addition, the number of daily on-line transactions handled by the main computer increased from 1,500 to 10,000 in 1978-79.

The Business Operations Division was involved during the year in a major reorganization, improvement and updating of the University Property Control System. Additional staffing was provided for the property section, a new policies and procedures manual was compiled and circulated and a property liaison was appointed for each University department. The Student Financial Aid Business Office handled a total of 2,241 student loan accounts, an increase of 12% over the number of accounts handled in fiscal year 1976-77. An average of \$147,411.77 in loan collections was made in fiscal year 1977-78 and 1978-79, representing a 50% increase over the amount collected during 1976-77.

The State Centrex System, which has been in operation for more than a year, continued to provide a much improved long distance system, backed by complete message detail on all long distance calls and departmental invoicing showing a break-down of charges. Total Centrex charges were \$1,112,800, which indicates a 6.1% savings over fiscal year 1977-78. A Records Management Section was established to develop retention, preservation and disposal programs for the records of the University in accordance with the Public Records Act of 1973. Plans were made for relocation of the University Bookstore and the Mail Room to new quarters during 1979-80.

ACADEMIC COMPUTER ACTIVITIES

Oversight of academic computer activities underwent change during the year. Initially, they came under an ad hoc academic computer committee which was chaired by the Vice President for Academic Affairs. Beginning January 1, however, the committee received a charter and became a standing committee known as the University Computer Committee. This committee has a total membership of 15 and represents all areas of the Medical University. The academic and administrative vice presidents serve as non-voting ex officio members while the director of the Medical University Computer Center serves as a voting ex officio member.

The committee meets at least monthly to review university computing activities and makes recommendations to the two vice presi-

dents as necessary. Two standing subcommittees have been established, one for computer-assisted instruction and one for review of hardware, software acquisitions.

Another new development was the creation of an on-line faculty information system by the Academic Vice President's office. This system now contains information on some 1,500 faculty members, which is continually being updated through a video terminal located in the office area of the vice president. Since educational information also is contained in the faculty information file, the system will be used in preparing university catalogues. In addition, the system has proven helpful in preparing reports concerning equal employment opportunity.

The Biometry Department has markedly improved its computing capabilities through acquisition of a new computer system manufactured by the Prime Computer Company. Both the primary and secondary storage of this new machine can be markedly expanded as its use grows. Thus this machine should provide an excellent resource for academic computing for at least the next five years. The Arthritis Center of the Department of Medicine already is working with the Biometry Department to develop an information system to handle data obtained from their research patients. The new computer also is interfaced to the main computer of the Medical University so that any computational requirements which are too large for the department's machine can be transmitted on-line to the central computer facility for the necessary processing.

The Office of Computer Resources of the College of Dental Medicine is developing specifications for a new computer system. As in the case of the Biometry Department, this new machine will allow for continued growth over the next five years and also will be interfaced to the central computer facility for transmission of administrative, academic and educational data as needed. In addition to strengthening the support of clinical areas, the new equipment will improve student record keeping and enhance the college's computer-assisted instructional programs.

The Office of Educational Services has added computer terminals to the Learning Resources Center. Four additional video terminals have been added for student use. This brings to nine the total number of terminals which are available for computer-assisted instructional purposes. Primarily, these terminals are used by physiology and pharmacology students to augment their educational experience. In conjunction with the University Computer Committee,

the Office of Educational Services will be developing a catalogue of self-instructional programs for remote as well as local use.

The computer system of the Department of Laboratory Medicine has undergone major upgrading during the year, involving both hardware and software. As a result, terminal display rates have now been increased four-fold and the potential for adding new peripheral equipment has been substantially increased. At the present time all areas of the department except routine bacteriology and the blood bank are computerized—these areas should complete computerization during the 1979-80 fiscal year. Terminals connected directly to the laboratory computer system have been placed at nursing stations on the fourth through the seventh floors of the hospital. Terminals also have been placed in the University's Comprehensive Health Care Medicine and Pediatric Clinics. Because the laboratory computer is interfaced to the central computer facility, all demographic information on patients admitted to the hospital or registered into the outpatient clinics is transmitted automatically to the laboratory computer. Conversely, billing information is transmitted across the same interface daily from the laboratory computer to the central computer.

The laboratory computer is being used for the training of graduate and post-graduate students. Medical residents who rotate through the department are taught to program on the machine and are encouraged to complete a worthwhile project during their training. Likewise, graduate students are trained on the system, e.g., at the present time a College of Pharmacy graduate student is developing pharmacokinetics software on the system under the guidance of laboratory computer division personnel.

Terminals at nursing stations are being used to make other than patient data available. For example, it is now possible to review various test methodology information such as cost of a test, normal and critical ranges for that test, and other special instructions concerning collection of the specimen and its transport to the laboratory. In addition, patient diagnoses are being entered through a terminal in the Medical Records Department and can be used by the faculty to locate patients with a specific diagnosis who might be of interest for teaching purposes.

A complete medical records chart management system has been developed. This system allows Medical Records personnel to accurately track charts on each patient and to assure that referring physicians have received necessary discharge information on their

patients. All data for this system is entered directly by Medical Records personnel through a terminal located in their area.

The Department of Medicine has acquired a stand-alone computer facility which now contains a Prime computer for use in patient research work. A separate word-processing system has also been installed.

The Department of Surgery has been using computer-assisted instruction for the training of its residents. Earlier in the year a video terminal was placed in the hospital surgical area for remote access to various surgical training programs. This pilot project proved quite popular. As a result, two small stand-alone systems have now been obtained and are available for training purposes within the department. Software is being developed for better analysis of data concerning intravenous therapy. This software would allow nursing personnel to display and update intravenous therapy information on the terminals located at nursing stations.

UNIVERSITY RELATIONS

Development, Alumni and Public Relations

In the calendar year 1978, private support of the Health Sciences Foundation exceeded one-half million dollars, with 55 donors contributing at a level of \$1,000 or more.

Dues paid by alumni in the first half of 1979 were equal to, and in some colleges exceeded, dues paid in 1978. The biggest increase was in the College of Medicine. Six alumni meetings were conducted in the Southeast and 12 class reunions were held in Charleston.

Among this year's new developments was the installation of a computer-based records and word processing system and the publication of a new quarterly tabloid to update alumni on Medical University progress.

The campaign to fund the J. Marion Sims Professorial Chair in Obstetrics and Gynecology was given special impetus, a highlight of the drive being a highly acclaimed benefit concert of the Charleston Symphony Orchestra under the baton of Maestro Andre Kostelanetz. Also, a benefit recital by Soprano Beverly Sills is planned for October.

The public service role of Public Relations continued to broaden with the production of health consumer messages for use on prime time television newscasts across the state. These messages are ex-

pected to reach an adult viewing audience of more than one million this coming year.

Altogether, 153 news releases were issued during the year; the Medical University figured in 1,034 stories in state newspapers, and television coverage was provided on more than 200 occasions. Forty-one campus tours were provided for some 800 visitors.

Renovation of Wickliffe House, the faculty-alumni facility at 178 Ashley Avenue, was begun.

Publications—Medical University Press

The growing pace of University educational, research and service activities required a high level of printing production this year. In meeting the printing demands, the Medical University Press recorded some 4,500 offset press runs and 400 major photocopy runs, some of textbook size.

Despite minimum price increases, sufficient revenue was generated to make possible the acquisition of a color head to sharply reduce printing time for two-color items such as stationery and envelopes, and also the replacement of a badly worn cutter.

The great variety of hospital and clinic forms was matched by that of publications, a sampling of which follows:

- Medical Terminology Workbook
- Rehabilitation Syllabus
- Area Health Education Center Reports
- Anatomy Study Guides
- Biometry Student Handbook
- Commencement Programs, Diplomas and Certificates
- Computer Center Monthly Newsletter
- Grapevine (biweekly student newsletter)
- Film Series Calendar
- Student Directory
- Comprehensive Control of Pain and Anxiety
- Dental Preclinical Syllabus
- Dental Physiology
- Radiologic Interpretation
- Newscope (employee monthly)
- Chart (weekly newsletter)
- Diet Manual
- Reflections (research newsletter)
- Professional Staff Bylaws, Rules and Regulations
- House Staff Manual and Directory

Essentials of Hematology
Essentials of Urinalysis
Introduction to Nuclear Medicine
Clinical Use of Blood and Blood Byproducts
Library Handbook
Medical Records Abbreviation Handbook
House Officer Bulletin
Physical Diagnosis
Lattice for Basic Bacteriology and Urology
Lattice for Microbiology
Nursing 207 Fundamentals
Analysis of Infant Mortality
Operating Room Policy and Procedures
Pediatric Core Manual
Employee Development Training Program
Basic and Clinical Pharmacology
Commentator (Pharmacy quarterly)
Neurophysiology Study Guide
Pre and Post Test Psychiatry Workbook
Parts I and II, Behavioral Sciences Study Guide
Alcohol Learning Program
Radiation Safety Manual
Surgery Annual Report
Urology Residency Survey
Laboratory Manual for Clinical Chemistry

CHARLESTON HIGHER EDUCATION CONSORTIUM

Baptist College

The Citadel

College of Charleston

Medical University of S. C.

S. C. Marine Resources Division

Trident Technical College

Substantial progress in relating educational opportunities to area employment needs was recorded this year by the Charleston Higher Education Consortium.

The South Carolina Occupational Information Coordinating Committee, a sub-agency of the Employment Security Commission, installed Occupational Information System (OIS) computer terminals on the campuses of each of the five consortium colleges. The purpose of the OIS is to provide its users with immediate and accurate information about education and career options and job openings. The OIS has also been installed in public schools, Employment Security Commission offices, and vocational rehabilitation centers throughout the tri-county region.

In connection with the installation of the OIS, the consortium along with the Employment Security Commission and the Trident Work Education Council cosponsored an Occupational Data Users/Producers Conference. The Conference, which featured national as well as regional experts, attracted some 170 participants, ranging from high school counselors to agency planners to computer technicians.

In another development, the consortium received a \$20,940 grant from the National Science Foundation to conduct a comprehensive survey of the continuing education needs of engineers, chemists, and chemical and engineering technicians employed by tri-county industries. This survey will enable the consortium institutions, for the first time, to identify and to document area-wide continuing education needs in the industrial sector. The resulting data base will provide a solid foundation on which to construct both short-term and long-term course and program planning.

Also, application has been made with the U. S. Office of Education for a \$198,000 grant to conduct an Educational Opportunity Center (EOC) program. This program would encourage disadvantaged tri-county residents to pursue postsecondary education by offering both pre-enrollment and post-enrollment counseling and related assistance. The program, made up of high school, community and postsecondary components, would be administered through Trident Technical College.

The consortium's operating budget for 1978-1979 was provided from three sources:

1. Member contributions, totaling \$22,500.
2. A \$17,000 appropriation from the State of South Carolina.
3. External grant support.

The student enrollment for the three Consortium graduate programs was as follows.

Special Education Program, 313 students (estimated 110 F.T.E.).

Master in Public Administration Program, 29 students (including 18 full-time students).

Marine Biology Program, 30 students.

The Academic Affairs and Executive Committees formulated and approved policies and procedures for cross-registration within the consortium. A brochure summarizing these policies and procedures has been printed, and is being distributed to all consortium faculty and staff who do student advising and, through the registrars' and deans' offices to consortium students. The effectiveness of these procedures will be monitored during the coming year.

The consortium is offering a 10-week (June 11-August 17) Undergraduate Marine Research Science program under the sponsorship of the S. C. Sea Grant Program. The eight student participants are working closely with marine researchers from the College of Charleston, The Citadel, the Medical University of South Carolina, and the Marine Resources Research Institute on research projects in their chosen areas of interest, including ecology, biology, biochemistry, physiology and geology. At the end of the program students are expected to prepare a scientific paper and to make an oral presentation on their research activities. Also, seminar speakers have been invited to discuss current research programs within all branches of marine science.

Humanities-in-Medicine activities over the year included the introduction of a new course, Science and Philosophy, in the Medical University's College of Graduate Studies, the expansion of the ethics component in Introduction of Medicine courses, and the continuation of a summer reading group for interested entering medical students. College of Charleston faculty were involved in the establishment of The Presidents' Forum lecture series—two lectures were held in the spring—and in the formation of a Humanities Task Force in the Medical University's College of Allied Health Sciences, which

has been charged with planning a humanities course offering for next year. Humanities-in-Medicine activities for the coming year will be supported, in part, by a grant from the Health Sciences Foundation; applications for further support will be submitted to the S. C. Commission for the Humanities and to the National Endowment for the Humanities.

The consortium entered into a contract with the Louisville Information Referral Center whereby the LIRC furnished a computerized print-out of the serials holdings of all six consortium libraries. This list currently contains nearly 7,000 separate holdings and, under provisions of the contract, the list will be periodically updated. It has been estimated that the initial holdings list was compiled by LIRC at a saving of \$6,000 over what the costs would have been had the list been locally developed and printed.

Under the auspices of Affiliate Artists, Inc., and with local funding from the S. C. Arts Commission, the consortium sponsored the community-wide residency of a mime, Ms. Graciela Binaghi. During her eight weeks of residency visits, Ms. Binaghi conducted numerous performances and "informances" (informal, small-group presentations), appearing before an estimated 8,500 persons. In keeping with the Affiliate Artists' objective of introducing the arts to new audiences, Ms. Binaghi's audiences included school children, community and neighborhood groups, and residents of children's and senior citizens' homes as well as college audiences. For this coming year, the consortium proposes a musician-in-residence, and has applied to a private foundation for the required matching funds.

The consortium has been awarded a grant of \$12,209 from the S. C. Community Services and Continuing Education (Title I) program to conduct a symposium on Health Care Coordination. The conference, which will be conducted by the College of Charleston's Center for Metropolitan Affairs in cooperation with the Medical University's Division of Continuing Education, is targeted for health care planners, providers, and consumers and will feature national as well as regional and local speakers. The symposium is scheduled for October 4-5, 1979.

Other proposals submitted for funding involved research into catastrophe theory and decision processes by the Biometry Department of the Medical University and Mathematics Departments of the College of Charleston and The Citadel; a national invitational conference to assess the consortium movement and project the future of consortia over the next decade; and a series of community issues programs to be aired over Educational Television.

